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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Gary A. Clawson et al.                      Art Unit : 1635  
Serial No. : 10/519,122                                      Examiner : Sean McGarry  
Filed : August 8, 2005  
Title : METHODS AND MATERIALS FOR TREATING HUMAN  
PAPILLOMAVIRUS INFECTIONS

**Mail Stop Amendment**  
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Alexandria, VA 22313-1450

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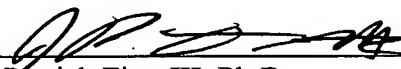
The following correspondence relating to this application is enclosed for filing:

1. Information Disclosure Statement (1 page);
2. Form PTO-1449 (6 pages);
3. Copies of Cited References (56 references); and
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Date: June 1, 2006

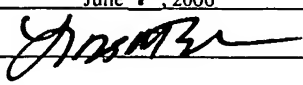
  
J. Patrick Finn III, Ph.D.  
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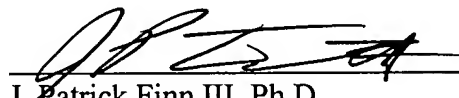
INFORMATION DISCLOSURE STATEMENT

Applicants request consideration of the references listed on the attached PTO-1449 form. Under 37 C.F.R. § 1.98 (a)(2)(ii), only copies of foreign patent documents and/or non-patent literature are enclosed. Copies of any listed U.S. patents or U.S. patent application publications can be provided upon request.

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Substitute Form PTO-1449  
(Modified)U.S. Department of Commerce  
Patent and Trademark OfficeAttorney's Docket No.  
14017-008US1Application No.  
10/519,122**Information Disclosure Statement  
by Applicant**

(Use several sheets if necessary)

(37 CFR § 1.98(b))

Applicant  
Gary A. Clawson et al.Filing Date  
August 8, 2005Group Art Unit  
1635**U.S. Patent Documents**

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	1	4,511,713	04/16/85	Miller et al.			
	2	4,560,678	12/24/85	Ranson			
	3	4,689,320	08/25/87	Kaji			
	4	4,740,463	04/26/88	Weinberg et al.			
	5	4,814,268	03/21/89	Kreider et al.			
	6	4,849,331	07/18/89	Lorincz			
	7	4,849,332	07/18/89	Lorincz			
	8	4,849,334	07/18/89	Lorincz			
	9	4,908,306	03/13/90	Lorincz			
	10	4,983,728	01/08/91	Herzog et al.			
	11	5,023,243	06/11/91	Tullis			
	12	5,057,411	10/15/91	Lancaster et al.			
	13	5,071,757	12/10/91	Kreider et al.			
	14	5,126,331	06/30/92	Gazzani			
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	18	5,272,065	12/21/93	Inouye et al.			
	19	5,334,761	08/02/94	Gebeyehu et al.			
	20	5,411,857	05/02/95	Beaudenon et al.			
	21	5,457,189	10/10/95	Crooke et al.			
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	23	5,543,417	08/06/96	Waldstreicher			
	24	5,554,538	09/10/96	Cole et al.			
	25	5,578,475	11/26/96	Jessee			
	26	5,580,547	12/03/96	Gilchrest et al.			
	27	5,589,466	12/31/96	Felgner et al.			

Examiner Signature

Date Considered

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Form PTO-1449 (Modified)  <b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. <b>14017-008US1</b>	Application No. <b>10/519,122</b>
	Applicant <b>Gary A. Clawson et al.</b>		
	Filing Date <b>August 8, 2005</b>	Group Art Unit <b>1635</b>	

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	28	5,591,574	01/07/97	Orth et al.			
	29	5,595,884	01/21/97	Androphy et al.			
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	31	5,643,715	07/01/97	Lancaster			
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	33	5,665,580	09/09/97	Crooke et al.			
	34	5,674,835	10/07/97	Androphy et al.			
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	40	5,776,502	07/07/98	Foulkes et al.			
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	47	5,952,487	09/14/99	Philipp et al.			
	48	5,955,597	09/21/99	Arnold, Jr. et al.			
	49	5,962,425	10/05/99	Walder et al.			
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	51	5,986,083	11/16/99	Dwyer et al.			
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	53	6,022,863	02/08/00	Peyman			
	54	6,025,163	02/15/00	Shamanin et al.			

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Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	55	6,028,188	02/22/00	Arnold, Jr. et al.			
	56	6,051,429	04/18/00	Hawley-Nelson et al.			
	57	6,060,456	05/09/00	Arnold, Jr. et al.			
	58	6,075,012	06/13/00	Gebeyehu et al.			
	59	6,084,090	07/04/00	DiPaolo et al.			
	60	6,087,341	07/11/00	Khavari et al.			
	61	6,107,086	08/22/00	Cole et al.			
	62	6,127,164	10/03/00	de Villiers et al.			
	63	6,136,332	10/24/00	Grollier et al.			
	64	6,172,048	01/09/01	Behr et al.			
	65	6,174,870	01/16/01	Crooke et al.			
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	67	6,326,174	12/04/01	Joyce et al.			
	68	6,506,559	01/14/03	Fire et al.			
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Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	70	EP 477 972	09/04/96	EPO				
	71	WO 93/20095	10/14/93	WIPO				
	72	WO 95/28942	11/02/95	WIPO				
	73	WO 96/20013	07/04/96	WIPO				
	74	WO 97/27206	07/31/97	WIPO				
	75	WO 98/04575	02/05/98	WIPO				
	76	WO 98/37240	08/27/98	WIPO				
	77	WO 99/14377	03/25/99	WIPO				
	78	WO 00/09673	02/24/00	WIPO				

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							Yes	No
	79	WO 00/14244	03/16/00	WIPO				
	80	WO 00/34466	06/15/00	WIPO				
	81	WO 00/60115	10/12/00	WIPO				
	82	WO 02/46449	06/13/02	WIPO				

Other Documents (include Author, Title, Date, and Place of Publication)		
Examine r Initial	Desig. ID	Document
	83	GenBank Accession No. K02718 dated 3/18/94, 6 pages
	84	GenBank Accession No. M14119 dated 6/2/94, 6 pages
	85	GenBank Accession No. X05015 dated 4/18/05, 6 pages
	86	Alvarez-Salas et al., "Inhibition of <i>HPV-16 E6/E7</i> immortalization of normal keratinocytes by hairpin ribozymes," <i>Proc. Natl. Acad. Sci. USA</i> , 1998, 95:1189-1194
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	89	Beutner et al., "Treatment of genital warts with an immune-response modifier (iquimod)," <i>J. Am. Acad. Dermatol.</i> , 1998, 38:230-239
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	92	Chen et al., "Effectiveness of three ribozymes for cleavage of an RNA transcript from human papillomavirus type 18," <i>Cancer Gene Ther.</i> , 1995, 2(4):263-271
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	95	Feldman and Sen, "A New and Efficient DNA Enzyme for the Sequence-specific Cleavage of RNA," <i>J. Mol. Biol.</i> , 2001, 313:283-294
	96	Garber, "Prescription RNA," <i>Technology Review</i> , 2002, pp. 42-48
	97	Herasse et al., "Expression and Functional Characteristics of Calpain 3 Isoforms Generated through Tissue-Specific Transcriptional and Posttranscriptional Events," <i>Mol. Cell. Biol.</i> , 1999, 19(6):4047-4055
	98	Jiang and Milner, "Selective silencing of viral gene expression in HPV-positive human cervical carcinoma cells treated with siRNA, a primer of RNA interference," <i>Oncogene</i> , 2002, 21:6041-6048

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(37 CFR §1.98(b))			

Other Documents (include Author, Title, Date, and Place of Publication)		
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	99	Kreider et al., "Laboratory Production In Vivo of Infectious Human Papillomavirus Type 11," <u>J. Virol.</u> , 1987, 61(2):590-593
	100	Kunke et al., "Preclinical study on gene therapy of cervical carcinoma using adeno-associated virus vectors," <u>Cancer Gene Ther.</u> , 2000, 7(5):766-777
	101	Laemmli, "Cleavage of Structural Proteins during the Assembly of the Head of Bacteriophage T4," <u>Nature</u> , 1970, 227:680-685
	102	Lewis et al., "Non-specific antiviral activity of antisense molecules targeted to the E1 region of human papillomavirus," <u>Antiviral Res.</u> , 2000, 48:187-196
	103	Lieber and Strauss, "Selection of Efficient Cleavage Sites in Target RNAs by Using a Ribozyme Expression Library," <u>Mol. Cell. Biol.</u> , 1995, 15(1):540-551
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	106	Okumoto et al., "Factors that Contribute to Efficient Catalytic Activity of a Small Ca <sup>2+</sup> -Dependent Deoxyribozyme in Relation to Its RNA Cleavage Function," <u>Biochemistry</u> , 2003, 42(7):2158-2165
	107	Pan et al. "A selection system for identifying accessible sites in target RNAs," <u>RNA</u> , 2001, 7:610-621
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	109	Pfaffl et al., "Relative expression software tool (REST©) for group-wise comparison and statistical analysis of relative expression results in real-time PCR," <u>Nucl. Acids Res.</u> , 2002, 30(9):e36, 10 pages
	111	Rorke, "Antisense Human Papillomavirus (HPV) E6/E7 Expression, Reduced Stability of Epidermal Growth Factor, and Diminished Growth of HPV-Positive Tumor Cells," <u>J. Natl. Can. Inst.</u> , 1997, 89(17):1243-1246
	112	Santiago et al., "New DNA Enzyme Targeting Egr-1 mRNA Inhibits Vascular Smooth Muscle Proliferation and Regrowth after Injury," <u>Nat. Med.</u> , 1999, 5(11):1264-1269
	113	Santoro and Joyce, "A general purpose RNA-cleaving DNA enzyme," <u>Proc. Natl. Acad. Sci. USA</u> , 1997, 94(9):4262-4266
	114	Schwarze et al., "In Vivo Protein Transduction: Delivery of a Biologically Active Protein Into the Mouse," <u>Science</u> , 1999, 285:1569-1572
	115	Slebos et al., "p53-dependent G <sub>1</sub> arrest involves pRB-related proteins and is disrupted by the human papillomavirus 16 E7 oncoprotein," <u>Proc. Natl. Acad. Sci. USA</u> , 1994, 91:5320-5324
	116	Stacey et al., "Scanning the structure and antigenicity of HPV-16 E6 and E7 oncoproteins using anti-peptide antibodies," <u>Oncogene</u> , 1994, 9:635-645
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	118	Tan and Ting, "In Vitro and in Vivo Inhibition of Human Papillomavirus Type 16 E6 and E7 Genes," <u>Cancer Res.</u> , 1995, 55:4599-4605
	119	Templeton et al., "Improved DNA: liposome complexes for increased systemic delivery and gene expression," <u>Nat. Biotechnol.</u> , 1997, 15:647-652

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Other Documents (include Author, Title, Date, and Place of Publication)		
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	120	Venturini et al., "Kinetic selection of HPV 16 E6/E7-directed antisense nucleic acids: anti-proliferative effects on HPV 16-transformed cells," <u>Nucl. Acids Res.</u> , 1999, 27(7):1585-1592
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